Televés

toner
cable equipment, inc.
www.tonercable.com

T.0X HDTV Encoder/Modulator

This family of HDTV encoder/modulator products offers MPEG-2 or H.264 encoding at rates up to 1080p, with either 2 HDMI and component, 2 component, or 4 composite inputs with a single QAM RF channel out for broadcast over new or existing single-wire coax cable infrastructure to an unlimited number of HDTVs.

It supports Dolby® Digital audio encoding ensuring quality and compatibility with any HDTV, Closed Captioning, and an optional EAS interface with ASI input and output for convenient signal management, and a watermarking option that enables forensic analysis of the content in support of content owners and licensing.

The units are also equipped with the innovative Televes integrated RF combiner and a built-in ethernet switch for integration and control of an entire system without needing additional accessories. Its high density, with up to 28 encoded channels per chassis, is optimum for large channel count environments where modularity and flexibility are critical.
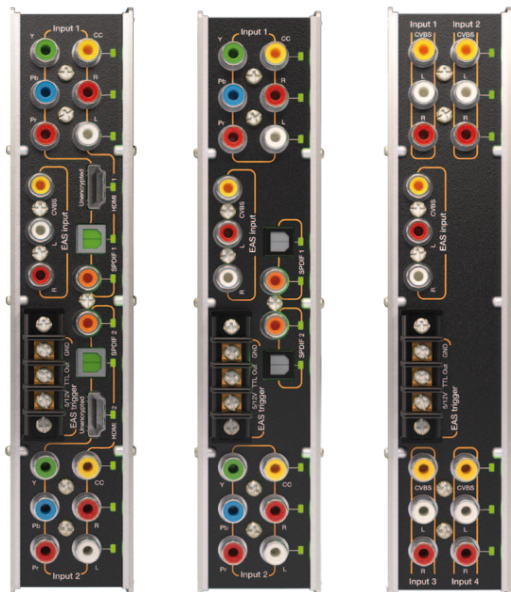
All this with the same form factor and comprehensive local and web based remote monitoring, control, and update capability of the T.0X family of products for easy integration and operation of a unified video headend.

Dual HDMI /
Component to QAM

Dual
Component to QAM

Quad
Composite to QAM

T.0X

■ **Two HDMI or HD component**
video channels multiplexed into one RF QAM channel
■ **Two HD component**
video channels multiplexed into one RF QAM channel
■ **Four composite**
video channels multiplexed into one RF QAM channel

Unlimited HD Video
Distribution Over Coax

High density, professional HD video encoding solution for new or existing coax infrastructure, for better quality in less bandwidth. **Compatible with any HDTV, use your existing coax cabling to distribute pristine high definition to an unlimited number of flat screen TVs!**

☑ Features

■ Up to 1080p MPEG-2 and H.264 encoding with auto-detection of input type and format
■ Real-time Dolby® Digital audio encoding
■ PSIP tables (VCT) allow users to configure 3 types of virtual channel maps for each channel
■ High power with +55 dBmV fully agile RF output from 5 to 1002MHz and >40dB MER
■ Optional EAS interface with composite video and L/R audio
■ Integrated ASI I/O provides easy EAS signal management
■ Same form factor and interface as the other T.0X family members
■ Easy-to-use and comprehensive remote control/monitoring/alarms from any web browser
■ Local configuration with hand-held programmer
■ Integrated RF Combiner and Ethernet switch for rapid deployment
■ Automatic remote firmware upgradeability for new future-proof features
■ Invisible watermarking for forensic content analysis

References			QUAD COMPOSITE TO QAM		DUAL COMPONENT TO QAM		DUAL HDMI/ COMPONENT TO QAM	
			563802	563821	563801	563811	563803	563831
INPUTS	VIDEO	Connectors	4 sets – 1x RCA for video (CVBS)		2 sets – 3x RCA for video (Y, Pb, Pr)		2 sets – 3x RCA for video (Y, Pb, Pr) 2 sets – 2x HDMI (unencrypted)	
	AUDIO	Connectors	4 sets – 2x RCA for analog audio (L, R)		2 sets – 2x RCA for analog audio (L, R)			
					2 sets – 1x RCA for digital audio (PCM)			
					2 sets – 1x toslink for digital audio (Optical)			
	CLOSED CAPTIONING	Connectors	4 sets – 1x RCA (CVBS in)		2 sets – 1x RCA (CC in)			
	EAS*	Connectors	n/a	3x RCA (CVBS, L, R)	n/a	3x RCA (CVBS, L, R)	n/a	3x RCA (CVBS, L, R)
		Trigger Vdc	n/a	5-12 (Dry contact closure)	n/a	5-12 (Dry contact closure)	n/a	5-12 (Dry contact closure)
	ASI	Connectors	1x BNC					
		Format	DVB-ASI					
		Standard	ETSI EN 50083-9					
	QAM	Connectors	1x "F" female (loop-through mix input)					
ENCODING PROFILE	VIDEO	Output Format	MPEG-2, H.264					
		Resolution	480i & 576i		480i, 480p, 576i, 576p, 720p, 1080i (MPEG-2/H.264) & 1080p (H.264)			
			Supports auto-scan for input resolution					
		Aspect Ratio	4:3, 16:9, and pass-through					
		GOP Structure	I & P					
		Transport rate	Variable					
		Video bit rate	Variable					
	AUDIO	Output format	Dolby® Digital AC-3 or MPEG-1 Layer 2					
		Sampling rate kHz	48					
		Output bitrate	Variable					
	CLOSED CAPTIONING	Format	EIA-608		EIA-608, EIA-708			
OUTPUT	QAM	Connectors	1x "F" female					
		Modulation standards	ITU-A: 16, 32, 64, 128, 256, 512, 1024 QAM					
			ITU-B: 64, 256 QAM					
		Frecuency Range MHz	5 – 1002 MHz (supports return path applications)					
		Channel plans	CATV STD, HRC, IRC, Broadcast, Frequency					
		Max output level dBmV	55 (43 with loop-through)					
		MER dB	>40 (Typ)					
		Spurious dBc	-60					
		Impedance Ω	75					
		I/Q Phase Error °	<1					
		I/Q Amplitude Imbalance %	<1					
	ASI	Connectors	1x BNC					
		Format	DVB-ASI					
ALARMS / MONITORING / CONTROL		Local control	Full configuration with LCD handheld programmer					
		Local monitoring	EAS status LED					
			LOOP status LED					
			QAM status LED					
			TEMP status LED					
			CH1/2 – CH3/4 status LEDS		CH1/2 status LED			
			Ethernet status LEDS					
		Remote monitoring	Centralized web based remote control, management, alarms, and software upgrades					
		Control	Daisy-chain built-in ethernet switch					
GENERAL		Power supply Vdc	24					
		Power disipation W	<19.2 (@1080p)					
		Operating Temperature °F/ °C	32 to 122 / 0 to 50					
		Storage Temperature	-13 to158 / -25 to 70					

Specifications Subject To Change Without Notice   Rev 0GËÍ   ©Toner Cable Equipment, Inc.